

### **REMARKS**

The amendment of claim 1 serves to correct a typographical error and is not in response to any rejection by the Examiner.

The Examiner rejected claims 1-2 and 7-24 under 35 U.S.C. § 102(a) as allegedly being anticipated by Flaherty, John, "Selected Excel Basic, Excel Tips for Efficient Spreadsheet Use", Available: [http://www.bf.rmit.edu.au/quant/Excel/Excel Tips.pdf](http://www.bf.rmit.edu.au/quant/Excel/Excel%20Tips.pdf), Available in 1999 (as further evidenced by Screen Shots provided from Microsoft Excel, copyright 1985-1999).

Applicant respectfully traverses the § 102 rejections with the following arguments.

### 35 U.S.C. § 102

The Examiner rejected claims 1-2 and 7-24 under 35 U.S.C. § 102(a) as allegedly being anticipated by Flaherty, John, “Selected Excel Basic, Excel Tips for Efficient Spreadsheet Use”, Available: [http://www.bf.rmit.edu.au/quant/Excel/Excel Tips.pdf](http://www.bf.rmit.edu.au/quant/Excel/Excel%20Tips.pdf), Available in 1999 (as further evidenced by Screen Shots provided from Microsoft Excel, copyright 1985-1999).

Applicants next provide three independent arguments to demonstrate that the preceding rejection of claims 1-2 and 7-24 under 35 U.S.C. § 102(a) is not valid. The three independent arguments demonstrate: (1) incorrect grounds of rejection; (2) inadequate evidence to support the rejection; and (3) Flaherty does not anticipate claims 1-2 and 7-24

#### Incorrect Ground of Rejection

Applicants respectfully contend that the ground for rejecting claims 1-2 and (i.e., anticipation by Flaherty as further evidenced by Screen Shots under 35 U.S.C. § 102(a)) is incorrect.

Under 35 U.S.C. § 102(a), “person shall be entitled to a patent unless ... (a) the invention was **known or used** by others in this country, or patented **OR** described in a **printed publication** in this or a foreign country, before the invention thereof by the applicant for patent” (emphasis added). Therefore, a printed publication can be used as a description of an invention only if the publication was published before the invention and certainly before the filing date of the patent application associated with the invention.

The Examiner has offered no proof that Flaherty was published before the filing date, namely 11/27/2001, of the present patent application. Therefore, Flaherty cannot be used as a

printed publication to anticipate claims 1-2 and 7-24 under 35 U.S.C. § 102(a).

The Examiner alleges that claims 1-2 and 7-24 were implemented in the 1999 version of Microsoft Excel, as allegedly evidenced by Screen Shots. Thus, the Examiner invokes Screen Shots to argue that the features disclosed in Flaherty were allegedly implemented in the 1999 version of Microsoft Excel. In response, Applicant asserts that the Examiner's reasoning is incorrect, because the date when the content disclosed in Flaherty was known or used does not permit Flaherty to be used as a printed publication to anticipate claims 1-2 and 7-24. Applicant asserts that even if the Examiner could prove that the content disclosed in Flaherty was known or used 3000 years ago, Flaherty still could not be used as a printed publication to anticipate claims 1-2 and 7-24, because the Examiner has offered no proof that Flaherty was published before the filing date, namely 11/27/2001, of the present patent application. Nonetheless, the Examiner is impermissibly using Flaherty as a printed publication to anticipate claims 1-2 and 7-24.

Since the Examiner invoked Screen Shots to argue that the features disclosed in Flaherty were allegedly implemented in the 1999 version of Microsoft Excel, the grounds of rejection should be that "the invention was **known or used** by others in this country ... before the invention thereof by the applicant for patent", which implies a public knowledge or usage of claims 1-2 and 7-24 before 11/27/2001. However, the Examiner's analysis does not even attempt to demonstrate each claimed feature was used in the 1999 version of Microsoft Excel. Instead, the Examiner's analysis uses Flaherty for its content as a **printed publication** and does not attempt to connect each claimed feature with Screen Shots to show a public knowledge or use before 11/27/2001.

In summary, the Examiner incorrectly alleged anticipation of Flaherty, and has used a “printed publication” analysis of Flaherty to show that Flaherty allegedly teaches each feature of claims 1-2 and 7-24. The Examiner’s grounds for rejection should have been an alleged public knowledge or use (in the 1999 version of Microsoft Excel) of claims 1-2 and 7-24 prior to 11/27/2001, accompanied by an analysis of Flaherty and Screen Shots to allegedly demonstrate the public use of claims 1-2 and 7-24 prior to 11/27/2001. In other words, Flaherty should have been used, together with Screenshots, as evidence of a public use of claims 1-2 and 7-24 prior to 11/27/2001 and not as a printed publication that anticipates claims 1-2 and 7-24.

Thus, the Examiner has used an incorrect ground of rejecting claims 1-2 and 7-24

Moreover, even if Flaherty could be used as a reference to allegedly anticipate claims 1-2 and 7-24 (however, Flaherty cannot be so used as explained *supra*), the Examiner has used a combination of two references (i.e., Flaherty and Screen Shots) to reject claims 1-2 and 7-24, rather than a single reference, which is not permitted under 35 U.S.C. § 102(a).

#### Inadequate Evidence To Support the Rejection

Even though the Examiner did not cast the rejection and accompanying analysis of claims 1-2 and 7-24 in terms of an alleged public knowledge or use (in the 1999 version of Microsoft Excel) prior to 11/27/2001, Applicant next provides an analysis to show that the evidence provided by the Examiner is insufficient to support an allegation of said public use.

A first issue is that the Examiner has not stated a publically available source for Screen

Shots. The Examiner states that Screen Shots are from Microsoft Excel 2000, having a copyright date from 1985-1999. Applicant acknowledges that the screen shot showing “About Microsoft Excel” evidences that Microsoft Excel 2000 has a copyright date of 1985-1999. However, Applicant requests that the Examiner specify a publically available source disclosing all screen shots that allegedly depict the filled in data. For example, what publically available source depicts the screen shot showing the data sequence 10, 15, 20, ..., 90 in cells A1, A2, A3, ..., A17, respectively? As another example, what publically available source depicts the screen shot showing a Start Value of “5” and a Stop Value of “90”. General purpose programs such as Microsoft Excel generally do not provide filled-in data as part of the program distributed to users. In order for these screen shots showing specific filled-in data to have evidentiary value, their source must be revealed and authenticated.

A second issue is that the screen shots do not provide evidence of pre-11/27/2001 enablement for implementing claims 1-2 and 7-24 via Microsoft Excel 2000, because of lack of pre-11/27/2001 documentation of the algorithms of claims 1-2 and 7-24. The Examiner is erroneously relying on the post-11/27/2001 publication of Flaherty for an alleged teaching of the method steps of the algorithms of claims 1-2 and 7-24.

The Examiner cannot rely on Flaherty alone for disclosure of those features of claims 1-2 and 7-24 not appearing in the screen shots, because the Examiner has offered no proof that Flaherty was published before the filing date of 11/27/2001 of the present patent application. The Examiner has not provided arguments demonstrating that all features of claims 1-2 and 7-24 disclosed in Flaherty are also disclosed in the screen shots. Applicant maintains that the screen

shots do not teach the algorithms of claims 1-2 and 7-24.

Microsoft Excel 2000 is a general purpose spreadsheet program with many optional features as well as being programmable. Therefore, there are an incredibly large number of different procedures that could **potentially** be implemented by using Microsoft Excel 2000. However, the only procedures that are enabled via Microsoft Excel 2000 are those procedures that are documented. For example, Applicant acknowledges that a person who is clever enough to conceive of the algorithm of claim 1 could use Excel 2000 to implement the algorithm of claim 1. However, the Examiner cannot find any pre-11/27/2001 reference that allegedly teaches the algorithm (i.e., method steps) of claim 1. Instead, the Examiner is erroneously relying on the post-11/27/2001 publication of Flaherty for an alleged teaching of the method steps of the algorithm of claim 1. The Examiner appears to disregard the fact that a general purpose computer program such Microsoft Excel 2000 is enabled for only those algorithms that are documented.

Therefore the use of Microsoft 2000, without evidence of a pre-11/27/2001 public disclosure of the algorithms of claims 1-2 and 7-24, is not enabled for using 1-2 and 7-24 before 11/27/2001.

#### Flaherty Does Not Anticipate Claims 1-2 and 7-24

Applicant respectfully contends that Flaherty does not anticipate claim 1, because Flaherty does not teach each and every feature of claims 1. Applicant will disregard the Examiner's referral to Screen Shots because the Examiner cannot use more than one reference to anticipate a claim, as explained *supra*.

Applicant respectfully contends that Flaherty does not teach the feature: “selecting the range of cells, said range comprising a plurality of sample cells and one or a plurality of empty cells, wherein prior to said selecting each sample cell contains a sample value ...; after said selecting, ordering the sample cells ...; and after said ordering, processing the empty cells comprising ... computing the value  $y_i$  of the empty cell according to the values  $y_{\text{previous}}$  contained in the selected one or plurality of previous sample cells, and the values  $y_{\text{next}}$  contained in the selected one or plurality of next sample cells.”

The Examiner argues that Flaherty discloses “[e]ntering a data series with specific start and stop values entered for a data series. For example cell A2 may contain a start value of 10 and a stop value of 90 is indicated with a step value of 5. See pages 4-5, "Entering a Data Series". In indicating a start and stop value in a series of cells, the "previous sample cell" and "next sample cell" of the empty cells in between the start value and stop value are specified.”

In response, Applicant respectfully contends that in Flaherty the start value of 10 and the stop value of 90 in the Series dialogue box is indicated in Flaherty, page 5. Flaherty does not anywhere teach that the start value of 10 and the stop value of 90 are placed in cells of the spreadsheet prior to selecting the range of cells, as required by claim 1.

In claim 1, the step of processing the empty cells is performed after each sample cell contains a value and is in the spreadsheet. Moreover, the “contained in” language in the feature “computing the value  $y_i$  of the empty cell according to the values  $y_{\text{previous}}$  **contained in** the selected one or plurality of previous sample cells, and the values  $y_{\text{next}}$  **contained in** the selected one or plurality of next sample cells” makes it clear that the value  $y_i$  computed for each empty cell utilized values  $y_{\text{previous}}$  and  $y_{\text{next}}$  are actually contained in the respective previous and next

sample cells.

In contrast, in the example in pages 4-5 of Flaherty, Step 1 fills the cell A1 with the starting value of 10. Step 2 enters the step value of 5 and the stop value of 90 into a dialog box shown in the Figure at the top of page 5 of Flaherty. **Since the dialog box is merely on the computer screen and is not comprised by cells of the spreadsheet, the stop value of 90 is not contained in any cell of the spreadsheet in Step 2**, which shows that the Examiner's reliance on the indication of the start value 10 and the stop value 90 has no significance with respect to claim 1. Step 3 selects the Fill command which generates the filled-in cells A1, A2, ..., A17 shown in the Figure at the top of page 5 of Flaherty.

Flaherty does not disclose an algorithm for generating the filled-in cells A1, A2, ..., A17 shown in the Figure at the top of page 5 of Flaherty. Therefore, Flaherty does not disclose computing a value for any of the empty cells A2, ..., A17 according to a value ( $y_{\text{previous}}$ ) contained in a previous cell and a value ( $y_{\text{next}}$ ) contained in a next cell. In fact, a simple algorithm to fill in the empty cells for the Flaherty's example is to use **only previous cell values** by using such C-language code as:

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for (i = 2 ; i=18; i++)  
Ai= Ai-1 + 5;
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In any event, Flaherty does not teach using an algorithm that uses both previous and next cell values, that are contained in the respective previous and next cells, for computing and filling the empty cells A2, ..., A17.

Based on the preceding arguments, Applicant respectfully maintains that Flaherty does not anticipate claim 1, and that claim 1 is in condition for allowance. Since claims 2 and 7-24



depend from claim 1, Applicant contends that claims 2 and 7-24 are likewise in condition for allowance.

In addition, with respect to claim 2, Flaherty does not teach the feature: “wherein said step of computing the value  $y_i$  of each empty cell according to the values  $y_{\text{previous}}$  contained in the selected one or plurality of previous sample cells, and the values  $y_{\text{next}}$  contained in the selected one or plurality of next sample cells, comprises the further step of: computing the value  $y_i$  of the empty cell according to the values  $x_{\text{previous}}$  associated with the content  $y_{\text{previous}}$  of the selected one or plurality of previous sample cells, and the values  $x_{\text{next}}$  associated with the content  $y_{\text{next}}$  of the selected one or plurality of next sample cells.”

The Examiner argues: “In reference to claim 2, Flaherty teaches entering a data series with specific start and stop values entered for a data series. For example cell A2 may contain a start value of 10 and a stop value of 90 is indicated with a step value of 5. See pages 4-5, "Entering a Data Series". In indicating a start and stop value in a series of cells, the "previous sample cell" and "next sample cell" of the empty cells in between the start value and stop value are specified.”.

In response, Applicant the preceding argument by the Examiner does not demonstrate a teaching by Flaherty of the preceding feature of claim 2.

Accordingly, Flaherty does not anticipate claim 2.

In addition, with respect to claim 7, Flaherty does not teach the feature: “wherein the

selected range of cells further comprises variable cells, a variable cell containing a value  $x_i$  associated with the content  $y_i$  of a particular sample cell or a particular empty cell”.

The Examiner argues: “In reference to claim 7, Flaherty teaches the range of cells comprise a value associated with the content of a sample cell. See pages 4-5, "Entering a Data Series".”

In response, Applicant the preceding argument by the Examiner does not demonstrate a teaching by Flaherty of the claimed variable cell.

Accordingly, Flaherty does not anticipate claim 7.

In addition, with respect to claim 8, Flaherty does not teach the feature: “wherein the step of computing the value  $y_i$  of an empty cell comprises the step of computing the value  $y_i$  as equal to:

$$y_i = y_{\text{previous}} + (x_i - x_{\text{previous}}) * ((y_{\text{next}} - y_{\text{previous}}) / (x_{\text{next}} - x_{\text{previous}}))$$

where :

$y_{\text{previous}}$  is the content of a previous cell containing a sample;

$x_{\text{previous}}$  is the value of the variable  $x$  associated with the content of the previous cell containing a sample;

$y_{\text{next}}$  is the content of a following cell containing a sample;

$x_{\text{next}}$  is the value of the variable  $x$  associated with the content of a following cell containing a sample;

$x_i$  is the value of the variable  $x$  associated with the empty cell.”

The Examiner argues: “In reference to claim 8, Flaherty teaches the value of  $y_i$  is calculated by determining the pattern in the range of cells. This entails determining content of a

previous/start cell and next/stop cell and the value associated with the content in order to determine the value of the empty cell. For example, content and value of a previous/start cell and a next/stop cell are used to calculate what goes into an empty cell. See pages 4-5, "Entering a Data Series".

In response, Applicant asserts Flaherty does not anywhere teach use of the formula:  $y_i = y_{\text{previous}} + (x_i - x_{\text{previous}}) * ((y_{\text{next}} - y_{\text{previous}}) / (x_{\text{next}} - x_{\text{previous}}))$  as required by claim 8.

Accordingly, Flaherty does not anticipate claim 8.

In addition, with respect to claim 9, Flaherty does not teach the feature: "wherein said selected range of cells comprises a double column or double row range of cells, said range of cells comprising  $2N$  cells, wherein the  $i$ -th cell in a first column or first row comprises a value  $x_i$  and the second column or second row comprises a value  $y_i = f(x_i)$ ."

Applicant notes that the Examiner does not allege that Flaherty teaches the preceding feature of claim 9.

Accordingly, Flaherty does not anticipate claim 9.

In addition, with respect to claim 10, Flaherty does not teach the feature: "wherein the step of filling cells comprises the further step of: defining a table and associating said table with the selected range of cells, said table comprising for each empty cell  $i$ :

- an "index field" for identifying said empty cell;
- a "sample field" for indicating that said cell is an empty cell;
- a " $X_i$  field" with the value  $x_i$  associated with said empty cell;
- an "index of previous sample field" with the value of the "index field" of a previous

record having a sample value;

a “X<sub>prev.</sub> sample field” with the value of the “X<sub>i</sub> field” of a previous record having a sample value;

a “f(X<sub>prev.</sub> sample) field” with a value  $y = f(x)$  of a cell in the range corresponding to a previous record having a sample value;

an “index of next sample field” with a value of the “index field” of a next record having a sample value;

a “X<sub>next</sub> sample field” with a value of the “X<sub>i</sub> field” of a next record having a sample value;

a “f(X<sub>next</sub> sample) field” with a value  $y = f(x)$  of a cell in the range corresponding to a next record having a sample value.”

The Examiner argues that Flaherty, page 2 teaches such a table.

In response, Applicant asserts that Flaherty does not teach the table recited in claim 10 with the table comprising for each empty cell the recited fields.

Accordingly, Flaherty does not anticipate claim 10.

In addition, with respect to claim 11, Flaherty does not teach the feature: “wherein said table further comprises for each sample cell i:

an “index field” for identifying said sample cell;

a “sample field” for indicating that said cell is a sample cell;

a “X<sub>i</sub> field” with the value  $x_i$  associated with said sample cell;

the “index of previous sample field” with the value of the “index field” of said sample cell;

a “X<sub>prev.</sub> sample field” with the value of the “X<sub>i</sub> field” of said sample cell;

the “f(X<sub>prev.</sub> sample) field” with the value  $y = f(x)$  of said sample cell;

the “index of next sample field” with the value of the “index field” of said sample cell;

the “X<sub>next</sub> sample field” with the value of the “X<sub>i</sub> field” of said sample cell;  
the “f(X<sub>next</sub> sample) field” with the value  $y = f(x)$  of said sample cell.”

The Examiner argues that Flaherty, page 2 teaches the recited field in the table.

In response, Applicant asserts that Flaherty does not teach the table recited in claim 11 with the table comprising for each sample cell the recited fields.

Accordingly, Flaherty does not anticipate claim 11.

In addition, with respect to claim 15, Flaherty does not teach the feature: “further comprising: responsive to an occurrence of at least one event, **automatically again performing** said processing the empty cells, wherein the at least one event is selected from the group consisting of a change of one or a plurality of sample cells in the range, a change of one or a plurality of empty cells in the range, an addition of one or a plurality of sample cells in the range, an addition of one or a plurality of empty cells in the range, a deletion of one or a plurality of sample cells in the range, a deletion of one or a plurality of empty cells in the range, and combinations thereof” (emphasis added)

The Examiner argues: “In reference to claim 15, Flaherty teaches a user can initiate a data series by entering a start value and an end value for a range of cells with a specified step value. By initiating the series dialogue box, a user may change the sample values or step values (i.e. start and stop values) thereby adding or deleting a sample cell or empty cell. See pages 4-5, “Entering a Data Series”. ”

In response, Applicants assert that Flaherty does not teach the “**automatically again performing**” aspect of the preceding feature of claim 15. Under 35 U.S.C. § 102(a), a reference

must either explicitly or inherently teach a claimed feature. Flaherty does not explicitly teach the “**automatically again performing**” aspect of the preceding feature of claim 15. Moreover, the Examiner’s allegation that Flaherty “*may* change the sample values or step values (i.e. start and stop values) thereby adding or deleting a sample cell or empty cell” does not constitute an inherent teaching by Flaherty of the “**automatically again performing**” aspect of the preceding feature of claim 15.

Accordingly, Flaherty does not anticipate claim 15. Similarly, Flaherty does not anticipate claim 16-21, based on the same analysis as used for claim 15.

In addition, with respect to claim 23, Flaherty does not teach the feature: “further comprising designating the selected range of cells as a persistent sampled range of cells (PSROC).”

The Examiner argues: “In reference to claim 22, Flaherty teaches a user can initiate a data series by entering a start value and an end value for a range of cells with a specified step value. By initiating the series dialogue box, a user may change the sample values or step values (i.e. start and stop values) thereby adding or deleting a sample cell or empty cell. See pages 4-5, “Entering a Data Series.”

In response, Applicant asserts that the preceding argument by the Examiner has no relevance to the preceding feature of claim 22.

Accordingly, Flaherty does not anticipate claim 22.

In addition, with respect to claim 23, Flaherty does not teach the feature: “wherein a

background color of the selected range of cells is a first color before said designating the selected range of cells as a PSROC, and wherein after said designating the selected range of cells as a PSROC the method further comprises changing the background color of the selected range of cells to a second color that differs from the first color”.

The Examiner alleges that “Flaherty teaches custom formatting of cells where a user can indicate a range of cells and font, border, pattern, and background information. See page 12.”

In response, Applicant notes that Flaherty, page 12 is totally silent as to the use of color for any purpose.

Accordingly, Flaherty does not anticipate claim 23.

In addition, with respect to claim 24, Flaherty does not teach the feature: “wherein for at least one empty cell of said empty cells:

said one or a plurality of previous sample cells consists of said plurality of previous sample cells,

said one or a plurality of next sample cells consists of said plurality of next sample cells, or

said one or a plurality of previous sample cells consists of said plurality of previous sample cells and said one or a plurality of next sample cells consists of said plurality of next sample cells.”

The Examiner argues: “In reference to claim 24, Flaherty teaches entering a data series with specific start and stop values entered for a data series. For example cell A2 may contain a start value of 10 and a stop value of 90 is indicated with a step value of 5. See pages 4-5, "Entering a Data Series". In indicating a start and stop value in a series of cells, the "previous

sample cell" and "next sample cell" of the empty cells in between the start value and stop value are specified.”

In response, Applicant asserts that the preceding argument by the Examiner has no relevance to the preceding feature of claim 24.

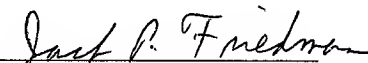
Accordingly, Flaherty does not anticipate claim 24.



### CONCLUSION

Based on the preceding arguments, Applicant respectfully believes that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0457.

Date: 11/27/2006

  
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